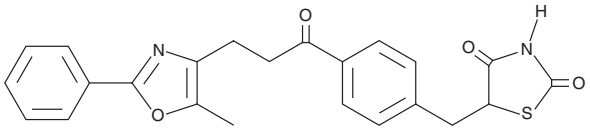
PRODUCT INFORMATION

Darglitazone

Item No. 17681

CAS Registry No.:	141200-24-0
Formal Name:	5-[[4-[3-(5-methyl-2-phenyl-4-oxazolyl)-1-oxopropyl]phenyl]methyl]-2,4-thiazolidinedione
Synonym:	CP 86,325
MF:	$C_{23}H_{20}N_2O_4S$
FW:	420.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 202, 253, 279 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Darglitazone is supplied as a crystalline solid. A stock solution may be made by dissolving the darglitazone in the solvent of choice. Darglitazone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of darglitazone in ethanol is approximately 5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Darglitazone is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Thiazolidinediones (TZDs) are a group of structurally related peroxisome proliferator-activated receptor γ (PPARγ) agonists with antidiabetic actions *in vivo*.[1,2] Darglitazone is a TZD that increases the sensitivity of cells to insulin, stimulating insulin-induced PI3K activity at submicromolar concentrations by increasing the expression of the p85 subunit of PI3K.[3] It increases insulin effectiveness in obese non-insulin-dependent diabetes mellitus subjects.[4] Darglitazone promotes adipocyte differentiation by up-regulating the expression of uncoupling protein-2.[5] Through PPARγ, darglitazone restores acute inflammatory responses to cerebral hypoxia-ischemia and reduces infarct size in diabetic *ob/ob* mice.[6]

References

1. Willson, T.M., Cobb, J.E., Cowan, D.J., *et al. J. Med. Chem.* **39**, 665-668 (1996).
2. Cantello, B.C.C., Cawthorne, M.A., Cottam, G.P., *et al. J. Med. Chem.* **37**, 3977-3985 (1994).
3. Zhang, B., Szalkowski, D., Diaz, E., *et al. J. Biol. Chem.* **269(41)**, 25735-25741 (1994).
4. Chaiken, R.L., Eckert-Norton, M., Pasmantier, R., *et al. Diabetologia* **38**, 1307-1312 (1995).
5. Camirand, A., Marie, V., Rabelo, R., *et al. Endocrinology* **139(1)**, 428-431 (1998).
6. Kumari, R., Willing, L.B., Patel, S.D., *et al. J. Cereb. Blood Flow Metab.* **30(2)**, 352-360 (2010).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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